

**ADDENDUM# 3**  
**FERNRIDGE PARK AQUATIC FACILITY RENOVATIONS**  
**Bid # 6216F**

July 27, 2011

Dear Vendors:

The Contract Bidding Documents pursuant to Bid # 6216F are hereby revised as follows:

The following clarifications are applicable to drawings and specifications for the project referenced above.

ADMINISTRATIVE:

1. Invitation to Bid: Bid Due Date and Time is changed to 2:00 PM, August 4, 2011

RESPONSES TO RFI'S RECEIVED DURING BIDDING:

2. **Question:** What is the specification for the Backwash Holding Tank access ladder?  
  
**Response:** Ladder rungs are to be equivalent to Lane International Corporation, Model # P-14850, polypropylene coated steel. (800-666-0076)
3. **Question:** What is the specification for the PVC "purple pipe" for the recycled water line?  
  
**Response:** The piping is manufactured either as solid purple or with purple stripes and the notations indicating "Recycled Water – Do Not Drink". This has become a standard product of most major pipe manufacturers.
4. **Question:** On S1.1, do the construction joints have to be in the locations shown, or is it up to the concrete contractor to decide?  
  
**Response:** Construction joints shall be located as shown on Drawing S1.1.
5. **Question:** Per addenda #1 they have changed EF-1, Can you confirm the Electrical requirements now that it is 1/3HP vs. 1-1/2HP. I'm assuming now it will only be single phase vs. 3 phase and will only require an STOL vs FVNR.  
  
**Response:** EF-1 shall be fed from a 15A-1P breaker in circuit #6, PP-2 with 2#12, #12G, ¾"C. It will require a thermal overload disconnect switch and a FVNR starter rated for 1/3HP.
6. **Question:** Also Pump P-3 per the motor circuit schedule on Drawing E002 is 7.5HP with a OCP Device of 50-3P yet they are calling for a 200-3P Disconnect w/combo starter and 1-1/4" C w/3#2 & 1#6.  
  
**Response:** Disconnect switch rating for P-3 can be revised to 60A-3P. Branch circuit for P-3 shall be revised to 3#6, #10G, 1"C.
- 7 **Question:** a. Drawing A 8.3 - detail 7 - what is the correct bolt diameter used to anchor the 6" x 4" steel angle?



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- b. Drawing A 8.3 -detail 7 - what thickness are the shim[s] located behind the 6" x 4" steel angle?
- c. Drawing A 8.3 - detail 7 - what bolt size to use at the railing post flanges, no size given?
- d. Drawing A 8.3 - detail 5 - the ½" steel plate information says " by depth as required" - required for what purpose? Does the plate get installed on both sides of the stairs and what dimension are the spacers is behind the steel plate?
- e. Is there damage to the face of the existing concrete where the 6" x 4" steel angle is being installed? If so to what extent?

*Response:*

- a. Bolt Diameter to be (2) ½" Bolt (not 2.5" as noted).
- b. Shim thickness will match the existing railing embeds, which are approximately 1".
- c. 3/8" diameter bolts shall be used to attach railing base flange to steel angle.
- d. The typical detail is to be applied to both sides of the stair. The spacers are the same shims as noted above.
- e. There is minimal damage to the face of concrete, including some minor spalling.

6. *Question:* Could you please provide a list in accordance with Section 131000; 1.3 B of the equipment that has been presented and approved prior to the bid date for clarification.

*Response:* Subject to compliance with the Specifications, substitutions will be considered for equipment not noted as "No Substitutions" in Specification Section 131500 "Swimming Pool Systems and Equipment". Addendum #1, Item 16 addressed potential substitutions to gutters, but no other modifications to the Specifications have been approved.

To date, only Whitten Products has expressed an interest in bidding a substitute gutter, which would need to be identified on the Bid Form, and would be subject to approval based on the requirements of the Contract Documents.

For clarification, of the sole sourced equipment, only the gutter is being considered for substitutions, per Addendum #1.

END OF ADDENDUM 03

Thank you for your patience, time and consideration.

Sincerely,



Tammy Bradley, CPM, C.P.P.B.  
Sr. Buyer

C: Jim Capodiece, Director of Leisure Services  
Jim Robertson, Leisure Services Supervisor  
Michael Fortuna, AIA TLB Architecture



## SECTION 334416 - TRENCH DRAIN AND GRATE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SECTION INCLUDES

- A. Provision of precast, presloped polymer concrete drain system including accessories necessary to install system.

#### 1.3 QUALITY ASSURANCE

- A. The manufacturer of Trench Drain to have minimum five years of successful installations of projects similar in scope to this project.
- B. Fabricator to be experienced in successfully producing custom polymer concrete drainage fabrications similar to requirements of this project. Fabricator to have sufficient production capacity to not delay work of this section.

#### 1.4 DESIGN REQUIREMENTS

- A. Design load on drainage system is:  
Load Class C: Pneumatic Tire Vehicles and Highway Vehicles, Low Speeds (parking areas, driveways).
- B. Design hydraulic flow at trench connection to outflow pipe to be 360 gal per minute.

#### 1.5 SUBMITTALS

- A. Submit manufacturer's shop drawings indicating layout of trench system with part numbers. Include plans, elevations, sections and details. Indicate accessories' part number and locations. Indicate manufacturer's recommended tolerances. Detail fabrication and erection. Detail connections, anchorage and accessory items.
- B. Manufacturer's catalog data showing:
  - 1. Product materials, dimensions of relevant components, chemical resistance guide, and installation guide.
  - 2. Specifically indicate compliance with Design Requirements article and Physical Properties article.
- C. Submit samples of trench system and components representative of materials and finished products.
- D. Provide flow calculations that demonstrate that the system meets the project requirements.

#### 1.6 SHIPPING AND STORAGE

- A. Ship with all necessary hardware securely fastened to the channels or shipping pallet.

- B. Do not stack loaded pallets of polymer concrete drain systems.
- C. Components and accessories to be identified and keyed to layout shop drawing.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURER

- A. Manufacturer to be equivalent to Strongwell - Lenoir City Division, Lenoir City, Tennessee, 1-800-346-3061. Product to be equivalent to POLYCAST®.  
  
600 Series Pre-sloped Drain for general, commercial, and industrial applications in 24' or 48" modular sections.
- B. Entire system of trench components and accessories to be obtained from a single source.

### 2.2 TRENCH CHANNEL MATERIAL

- A. Use first run product of the best quality and suitable for the purpose intended. Product to be free of defects and imperfections that effect performance of installed system.
- B. Trench drain channels to be precast polymer concrete utilizing vinyl ester resin.
- C. Precast trench units with minimum average slope of 0.65%. Precast trench units with two foot or four foot lengths.
- D. Provide horizontal anchoring ribs located along the bottom of the channel to mechanically engage into concrete. Anchoring rib to be minimum sixty (60) percent of channel length. Channel base to be four and three-eighths inches (4-1/4") wide to provide maximum load distribution.
- E. Every fifth sloped trench channel to have provision for vertical drain outside in four (4") and six (6") inch pipe.

### 2.3 TRENCH CHANNEL PHYSICAL PROPERTIES

DESCRIPTION	TEST METHOD	VALUES
Accelerated Service	ASTM D756-E	Retains 75% strength <2% change in weight or dimension
Chemical Corrosion	ASTM D543	Retains 75% strength <2% change in weight or dimension
Water Absorption	ASTM D570	<1%

- A. No cracking, crazing, checking, blistering, or surface pitting is allowed. Changes in color acceptable when not indicative of physical degradation.

## 2.4 CHANNEL GRATE MATERIALS

### A. Equip channels and catch basins with:

POLYCAST® DG0644SP fiberglass gratings fabricated from 1/4" x 3/4" pultruded fiberglass bars. Bar spacing shall be three-eighths (3/8") inch or less on centers to provide an intake cross section of 25.5 square inches per linear foot. Bar material to be vinyl ester resin, gray in color with anti-skid grit surface, suitable for bare foot traffic. Bar material to be vinyl ester resin, gray in color with anti-skid grit surface.

### B. Manufacture grating to bear evenly on channel edges.

### C. Provide non-metallic lock down bolts and bars.

### D. Provide grating sections in lengths to match the channel sections. Grates to have a width of five and one-fourth (5-1/4") inches.

## 2.5 ACCESSORIES

### A. Provide two (2) lock down mechanisms per four-foot section, one (1) per two-foot section. Provide lock down bolts with each channel and grate assembly. Lock down mechanism to withstand installation torque of twenty (20) ft. lbs.

### B. Provide male and female end caps at termination of trench runs.

### C. Make available and provide transition pieces for female to female connections and male to male connections when required.

### D. Catch basins shall be precast vinyl ester polymer concrete POLYCAST® 651 with corrugated plastic trash buckets. Fully interlock trench drains entering catch basins with tongue and groove connections. Discharge pipe connections shall be 4".

### E. Provide side-wall extensions of seven and thirteen-sixteenths (7-13/16") inches for extended channel runs while continuing the standard 0.65% slope.

## PART 3 - EXECUTION

### 3.1 PREPARATION

#### A. Excavate trench for channel placement. Trench excavation to be minimum four (4") inches wider on both sides and four (4") inches deeper than polymer concrete channel cross section to accommodate bedding concrete.

### 3.2 INSTALLATION

#### A. Install in strict accordance with manufacturer's to installation recommendations and approved shop drawings.

#### B. Use sealant to interlock adjoining trench surfaces. Comply with sealant manufacturer's recommended

surface preparation techniques. Clean surplus sealant from interior trench surface and grate bearing areas.

- C. Begin channel placement at deepest end usually at outflow pipe or catch basin. Place channels in numerical sequence with flow arrows correctly oriented.
- D. Firmly anchor channels using manufacturer's chair support. Place one support chair at each end of trench channel. Bolt support chair on to preformed conical dimple on trench channel. Drive No. 4 rebar into subgrade at chair locations. Hang support chair on rebar. Adjust trench flush to Top of Slab (TOS). Elevation noted on plans.

POLYCAST® support chair is unique and patented. The POLYCAST® chair is critical for alignment, mechanical interlock and to prevent channel floating during the placement of the concrete.

- E. All metallic supports, anchors and components to be bonded and grounded, in accordance with Division 16 requirements.
- F. After finishing concrete, thoroughly clean channels and grates. Reinstall grates and secure with lock down devices to hold the gratings firmly in place.

END OF SECTION 02635